

B.6 19 JANUARY 1973

At 19/00Z, Figure B-25, the long wave upper trough remained virtually stalled near the Strait of Hormuz, where it had been since 18/00Z. By 19/12Z, it had begun to move eastward again, and was centered near the Afghanistan-Iran border at about 60°E by 12Z (Figure B-27). The surface analyses suggest that the shamal continued at 00Z (Figure B-26) with northwesterly 20 kt winds at Dhahran near 26°N, 50°E. The wind remained at 20 kt at Dhahran at 20/12Z (Figure B-28). There are signs, however, that the shamal is about to weaken. The surface pressure gradient began to slacken in the southern Persian Gulf. The 19/12Z surface analysis, Figure B-28, suggests a phenomenon that tends to foretell the end of the shamal. Easterly winds, local sea breeze effects, or a combination of the two, began to appear in the extreme eastern part of the Gulf

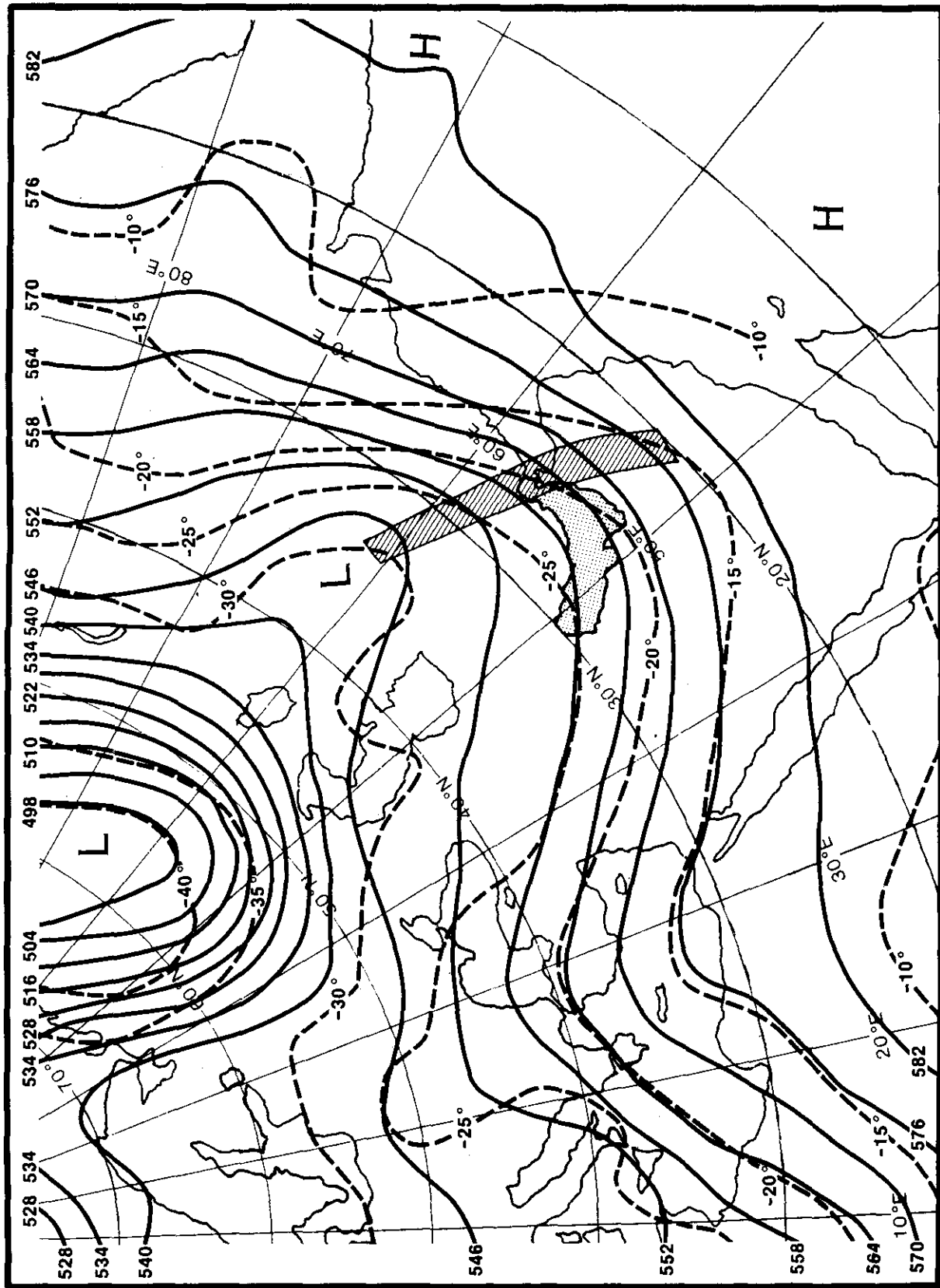


Figure B-25. 500 mb analysis, 19 Jan 1973 0000Z.

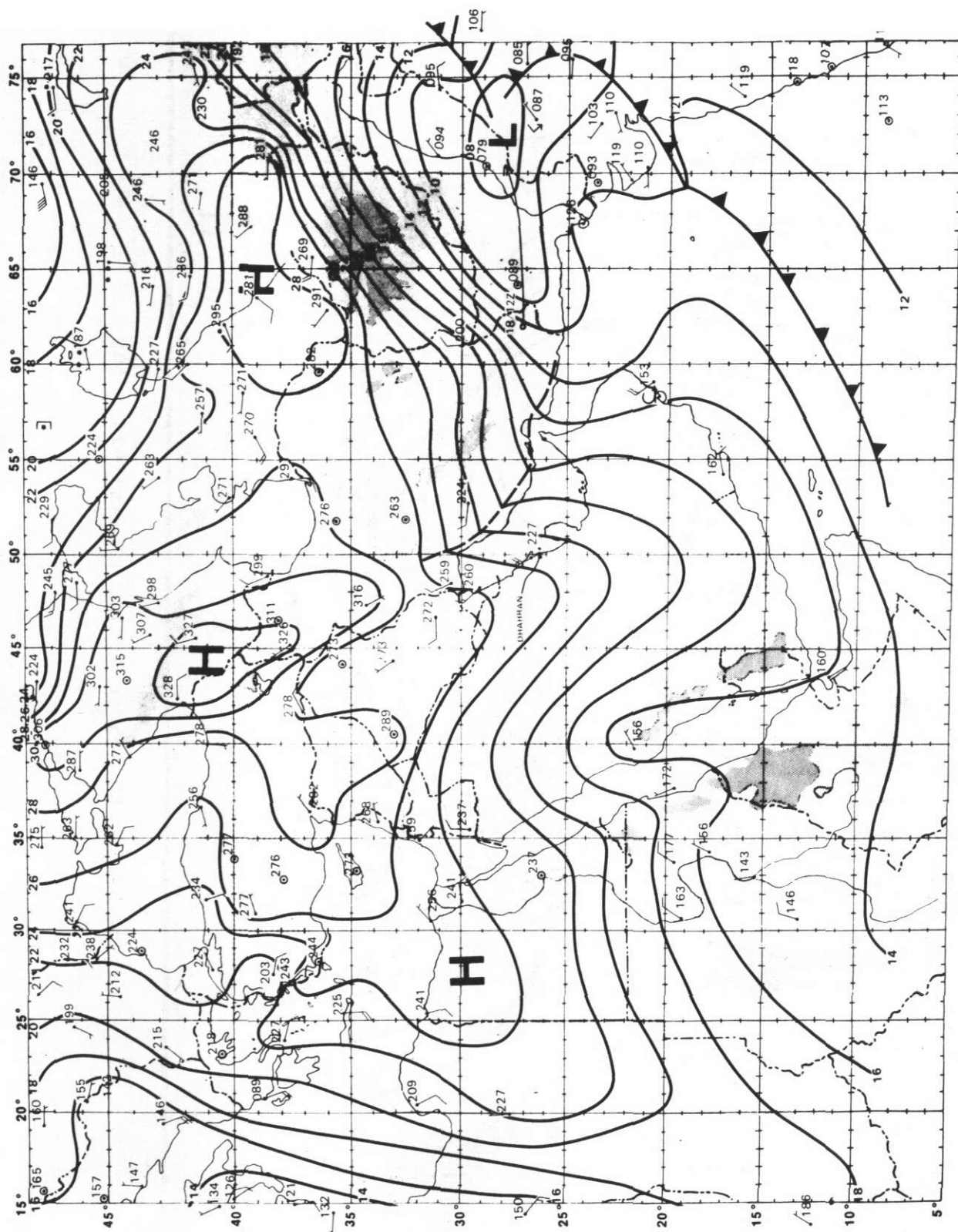


Figure B-26. Surface analysis, 19 Jan 1973 0000Z.

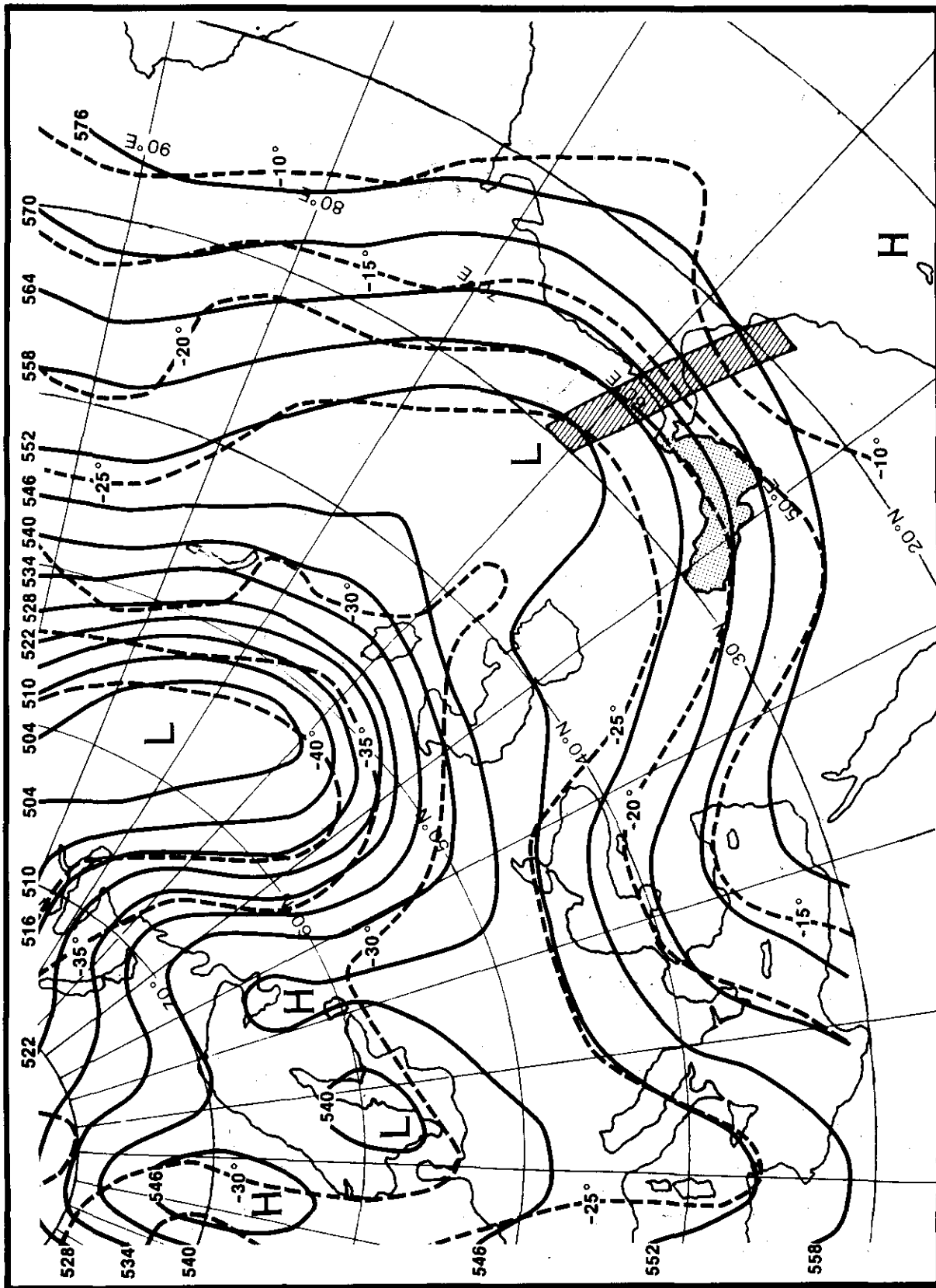


Figure B-27. 500 mb analysis, 19 Jan 1973 1200Z.

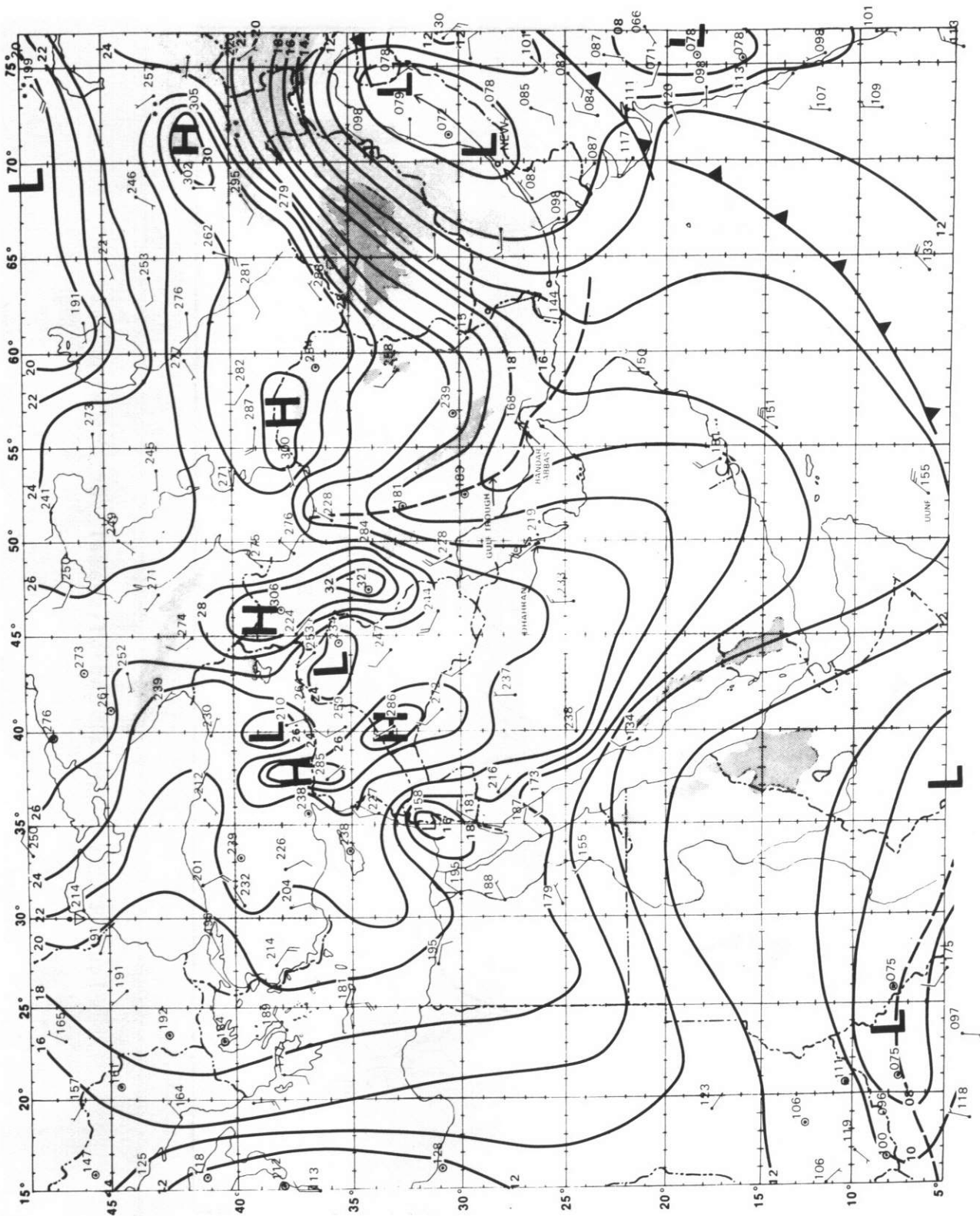


Figure B-28. Surface analysis, 19 Jan 1973 1200Z.

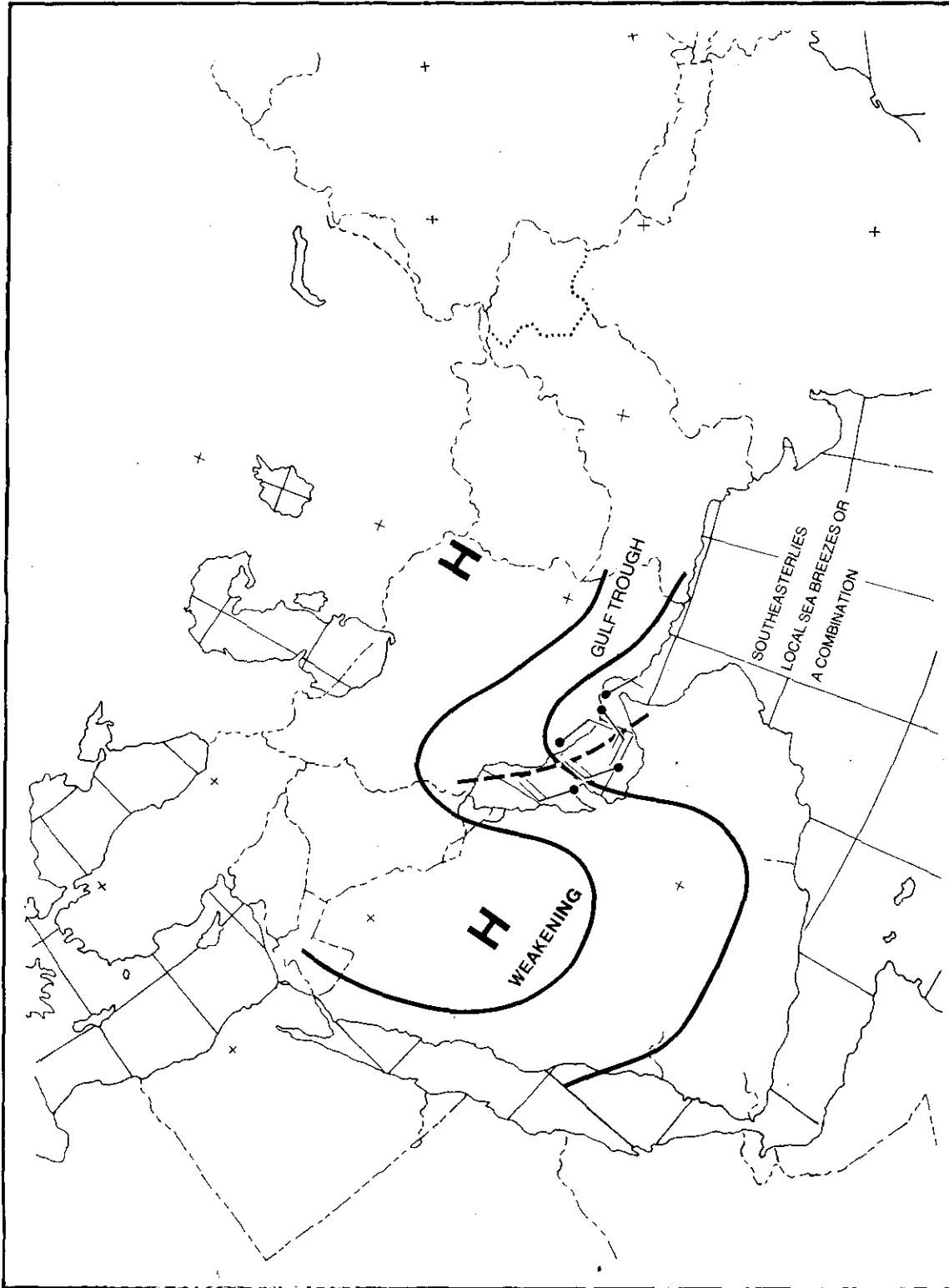


Figure B-29. Typical end-of-shamal surface wind pattern.

-- SATELLITE IMAGERY SHOWN ON NEXT FACING PAGES --

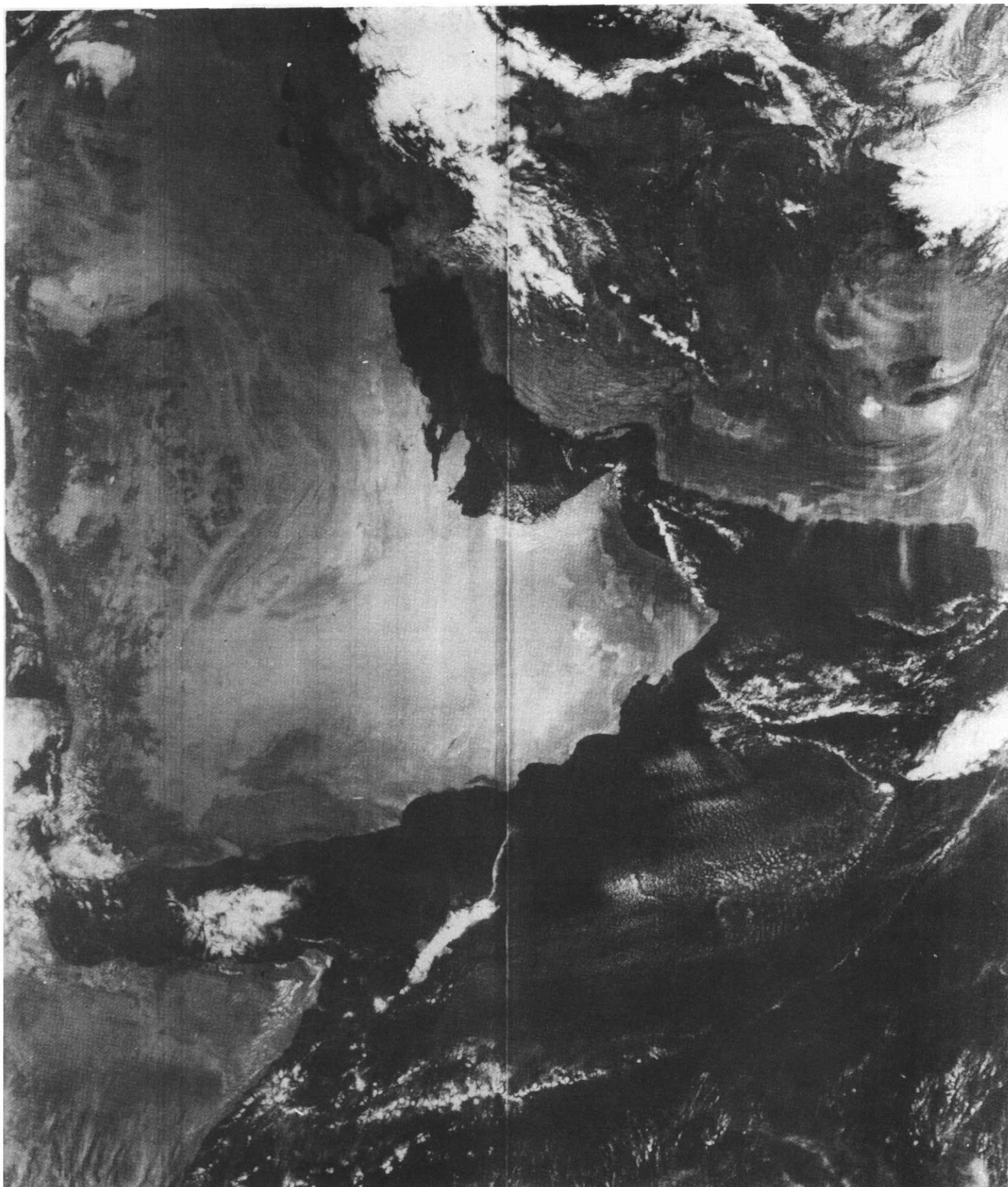


Figure B-30. DMSP visible image, 19 Jan 1973 local noon.



Figure B-30. Continued.

(note southeasterly winds at Bandar Abbas near 27°N, 56°E), while 15-20 kt northwesterlies persisted on the western side (see Figure B-29).

The DMSP visible image near local noon on 19 Jan, Figure B-30, also foretells the breaking of the shamal. Note a convergence band oriented northwest-southeast, on the visible image. No complete explanation can be offered for the presence of this feature without more supporting data; however, its shape suggests a convergence zone for offshore low level flow.*

Analysis of the DMSP visible image for 19 Jan (Figure B-30) suggests that the convergence band was formed by the meeting of a westerly flow off the Hajar Mountains with a north-to-northeasterly flow off the Iran-Pakistan mainland. The westerly flow is suggested by the alignment of the lower-level cloud elements over the southern Persian Gulf (including a weak eddy in the southern Gulf just to the east of the Strait of Hormuz). The northerly flow is traced by blowing sand and dust advected out over the Arabian Sea between 60°E to 67°E near 25°N.

*Compare this with the DMSP images of 26 Jan 1974 (Figures A-31 and A-32, Case Study 1, Appendix A) at the end of that shamal -- they appear to be similar cloud structures.